



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 82-4-L107-840-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN from BALLABS TEST NO. 20804.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUEDATE] 04-MAR-2020  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO  
 [LUMINAIRE] 4-28 LED 22" ARRAYS 4' INDUSTRIAL LUMINAIRE  
 [MORE] WHITE REFLECTOR w/OPEN BOTTOM  
 [LUMCAT] 82-4-L107-840-DIM-UNV

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	10828
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	159
Total Luminaire Watts	68.3
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.34
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.44
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	1.08 ft
Luminous Height	0.00 ft



### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	10354	10193	10062
55	10115	10019	5197
65	9494	5170	5071
75	7548	1675	1562
85	2609	1304	580

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CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
<b>0</b>	4043.264	4043.264	4043.264	4043.264	4043.264
<b>5</b>	4107.712	4036.480	4000.864	3994.080	3995.776
<b>10</b>	4063.616	3994.080	3958.464	3951.680	3951.680
<b>15</b>	3995.776	3924.544	3888.928	3980.512	4043.264
<b>20</b>	3897.408	3826.176	3902.496	3875.360	3938.112
<b>25</b>	3761.728	3704.064	3790.560	3649.792	3653.184
<b>30</b>	3612.480	3570.080	3522.592	3502.240	3498.848
<b>35</b>	3422.528	3505.632	3324.160	3341.120	3324.160
<b>40</b>	3183.392	3341.120	3142.688	3127.424	3105.376
<b>45</b>	2949.344	2939.168	2903.552	2867.936	2866.240
<b>50</b>	2650.848	2625.408	2611.840	2535.520	1612.896
<b>55</b>	2337.088	2330.304	2315.040	1210.944	1200.768
<b>60</b>	1970.752	2001.280	1065.088	1043.040	1043.040
<b>65</b>	1616.288	1609.504	880.224	849.696	863.264
<b>70</b>	1193.984	1207.552	678.400	235.744	184.864
<b>75</b>	786.944	478.272	174.688	161.120	162.816
<b>80</b>	405.344	206.912	125.504	105.152	98.368
<b>85</b>	91.584	76.320	45.792	23.744	20.352
<b>90</b>	3.392	32.224	11.872	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1498.64	N.A.	13.80
0-30	3212.62	N.A.	29.70
0-40	5329.17	N.A.	49.20
0-60	9262.78	N.A.	85.50
0-80	10750.5	N.A.	99.30
0-90	10827.99	N.A.	100.00
10-90	10445.45	N.A.	96.50
20-40	3830.53	N.A.	35.40
20-50	6046.06	N.A.	55.80
40-70	5021.06	N.A.	46.40
60-80	1487.72	N.A.	13.70
70-80	400.26	N.A.	3.70
80-90	77.49	N.A.	0.70
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	10827.99	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	382.54
10-20	1116.1
20-30	1713.98
30-40	2116.55
40-50	2215.53
50-60	1718.08
60-70	1087.46
70-80	400.26
80-90	77.49
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	198	198	198	198	193	193	193	193	184	184	184	177	177	177	169	169	169	166
1	182	175	169	163	178	172	166	161	165	160	156	158	154	151	152	149	146	143
2	167	155	144	135	163	151	142	134	146	138	131	140	134	128	135	130	125	122
3	153	137	124	114	149	134	122	113	129	119	111	125	116	109	121	113	107	104
4	140	122	108	97	137	119	107	97	115	104	95	112	102	94	108	100	93	89
5	129	109	95	84	126	107	94	84	104	92	83	100	90	82	97	88	81	78
6	120	98	84	74	116	97	83	73	94	82	73	91	80	72	88	79	71	68
7	111	89	75	65	108	88	74	65	85	73	64	83	72	64	81	71	63	60
8	103	81	68	58	101	80	67	58	78	66	58	76	65	57	74	64	57	54
9	96	75	61	52	94	74	61	52	72	60	52	70	59	52	68	59	51	48
10	90	69	56	47	88	68	56	47	66	55	47	65	54	47	63	54	47	44

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**UGR TABLE - CORRECTED**

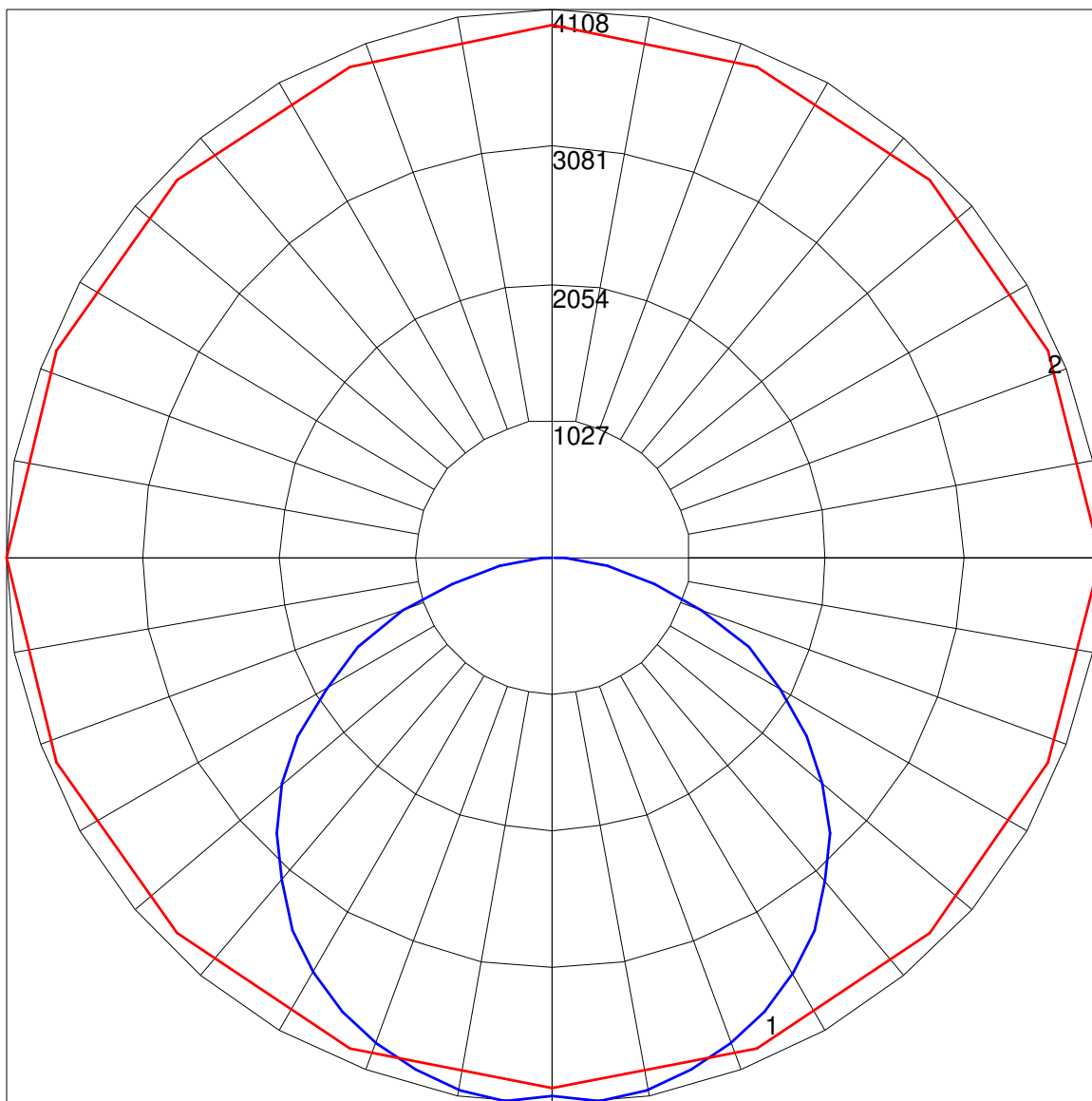
Reflectances

Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	19.2	20.7	19.5	21.0	21.4	14.6	16.2	15.0	16.5	16.8
	3H	20.9	22.3	21.3	22.7	23.0	15.2	16.6	15.6	17.0	17.3
	4H	21.4	22.7	21.8	23.0	23.4	15.3	16.6	15.7	17.0	17.4
	6H	21.7	22.9	22.1	23.2	23.6	15.4	16.6	15.8	17.0	17.4
	8H	21.7	22.9	22.2	23.3	23.7	15.4	16.6	15.8	16.9	17.3
	12H	21.7	22.8	22.2	23.2	23.6	15.4	16.5	15.8	16.9	17.3
4H	2H	19.2	20.6	19.6	20.9	21.3	15.3	16.7	15.7	17.0	17.4
	3H	21.3	22.3	21.7	22.7	23.1	16.1	17.1	16.5	17.5	17.9
	4H	21.8	22.7	22.2	23.1	23.6	16.2	17.1	16.6	17.6	18.0
	6H	22.1	22.9	22.5	23.4	23.8	16.3	17.1	16.7	17.6	18.0
	8H	22.2	23.0	22.6	23.4	23.9	16.3	17.1	16.8	17.5	18.0
	12H	22.2	22.9	22.7	23.4	23.9	16.3	17.0	16.8	17.5	17.9
8H	4H	21.7	22.5	22.2	22.9	23.4	16.5	17.3	16.9	17.7	18.2
	6H	22.0	22.7	22.5	23.2	23.7	16.6	17.3	17.1	17.8	18.2
	8H	22.2	22.7	22.7	23.3	23.7	16.7	17.2	17.2	17.8	18.2
	12H	22.2	22.7	22.7	23.2	23.8	16.7	17.2	17.2	17.7	18.2
12H	4H	21.7	22.4	22.2	22.9	23.3	16.5	17.2	17.0	17.7	18.2
	6H	22.0	22.6	22.6	23.1	23.6	16.7	17.2	17.2	17.7	18.3
	8H	22.1	22.7	22.7	23.2	23.7	16.7	17.2	17.2	17.7	18.3

Maximum UGR = 23.9

POLAR GRAPH



Maximum Candela = 4107.712 Located At Horizontal Angle = 0, Vertical Angle = 5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)